

Work Order ID 136146

Friday, August 28, 2015 1:55:36 PM

646.3311

136146

Page 1

Item ID: 646.3311

Revision ID:

Item Name: RH Half

Start Date: 8/31/2015 Start Qty: 4.00

Required Date: 8/31/2015 Req'd Qty: 4.00

Reference:

Accept:

N900040100

Setup Start

NS1

Stop

NS2

Cust Item ID:

Customer:

Approvals:

Process Plan: SH/LL

Date: 8/15/08

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

646.3300

N/C3

110

0.09

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.25

HAAS CNC vertical machine #1

1-Machine per folio FB154

DWG REV: N/C

FOLIO REV: AA

Blank 13.375

2- deburr and break all sharp edges

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Memo

0.00

Quality Control

4

0

15/10/07

4

0

15/10/07

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition			Completed By																		
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			

Work Order ID 136146

Friday, August 28, 2015 1:55:36 PM

136146

Page 2

Item ID: 646.3311

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: RH Half

Stop

NS2

Start Date: 8/31/2015 Start Qty: 4.00

4

Cust Item ID:

Required Date: 8/31/2015 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.00

Quality Control

DAS
14
9-89

15/10/07

131

0.00

131

HandFinish

Memo

0.00

Hand Finishing

~~CLEAN AND REMOVE ALL PART MARKING~~
N/A

140

Outsource process-Anodize per QSI017 4.1.10.1

0.00

140

Outsource4

Memo

0.00

Outsource process - Anodize

Issue P/O to ATG : 30121

1- Black Anodize as per Dwg 646.3300

2- PRIME AS PER DWG, SEE NOTE #2

Certification of Conformity is required

CZ OCT 14 2015

4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
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OTHER :					

Work Order ID 136146

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136146

Page 4

Item ID: 646.3311

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: RH Half

Stop ***NS2***

Start Date: 8/31/2015 Start Qty: 4.00

4

Cust Item ID:

Required Date: 8/31/2015 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC21 - Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									

20151026
SLH

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

Picklist Print

Friday, August 28, 2015 1:55:40 PM

Page 1

Work Order ID: 136146

136146

Parent Item: 646.3311

646.3311

Parent Item Name: RH Half

Start Date: 8/31/2015

Required Date: 8/31/2015

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A NEW ISSUE 12/11/27 JFS VERIFY BY: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M7075T6B7.000X2.000

Purchased

No

f

6.0000

4.694737

M7075T6B7 000X2 000

7075-T6 BAR 7.000" X 2.000" (order in billets)

Location

Loc Qty

Loc Code

MAT024

6

m130760

6

M133238 X 4.7

and 15/10/05

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
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								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
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Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04765

SHEET 1 OF 1

DWG NO. 646.3300

REV: NC

PREPARED BY J. SOTO

DATE: 12/08/2014

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: UPPER CUTTER ASSY

APPROVED BY: ENGR. *[Signature]*

MFG. *[Signature]*

QC *[Signature]*

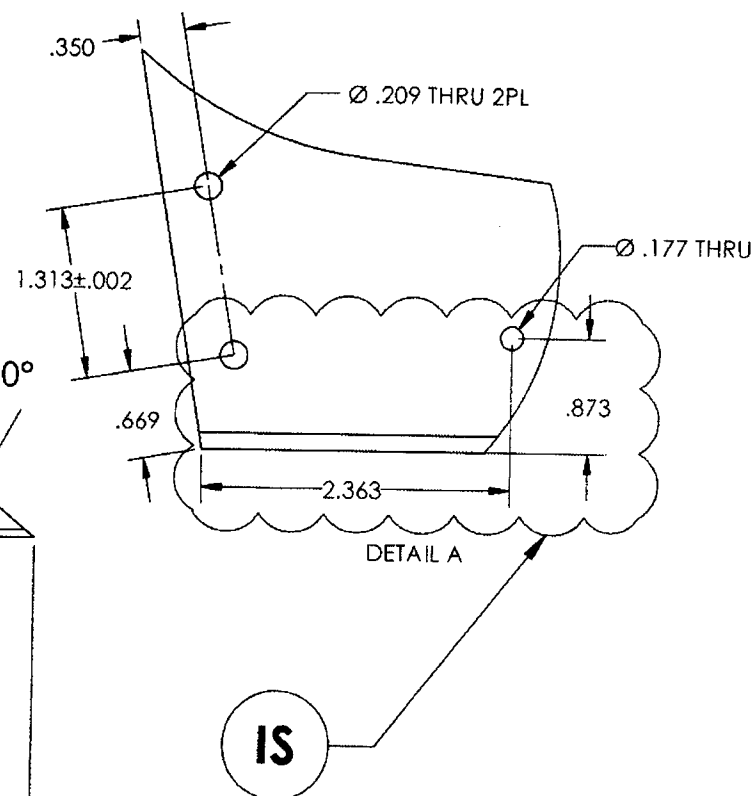
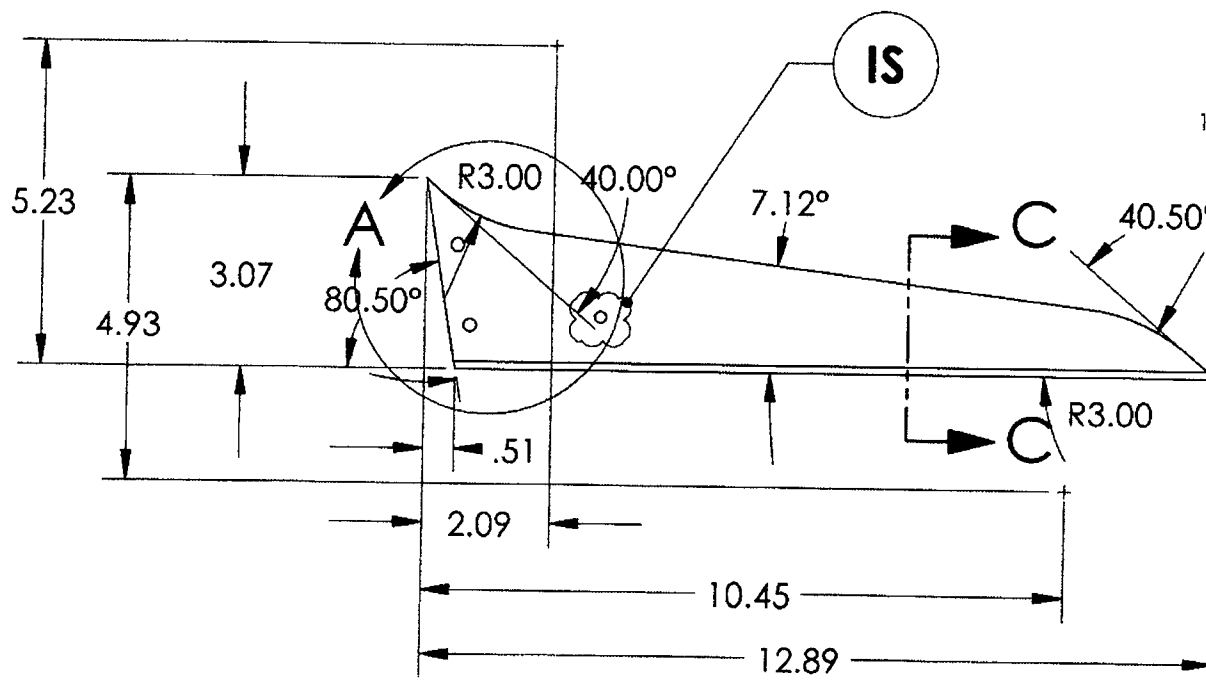
EFF. NEXT ORDER

TRANSACTION CODES (TC):
 A-ADD C-CREATE
 R-REVISE D-DELETE

REASON: ADDED HOLE DIMENSION TO 646.3313.

SHEET 5 IS:

20150831
 136146
 SH



DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO

APICAL
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 03724

SHEET 1 OF 1

DWG NO. 646.3300

REV: N/C

PREPARED
BY B. PETERS

DATE: 12/05/12

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: UPPER CUTTER ASSY

APPROVED BY: ENGR

MFG

QC

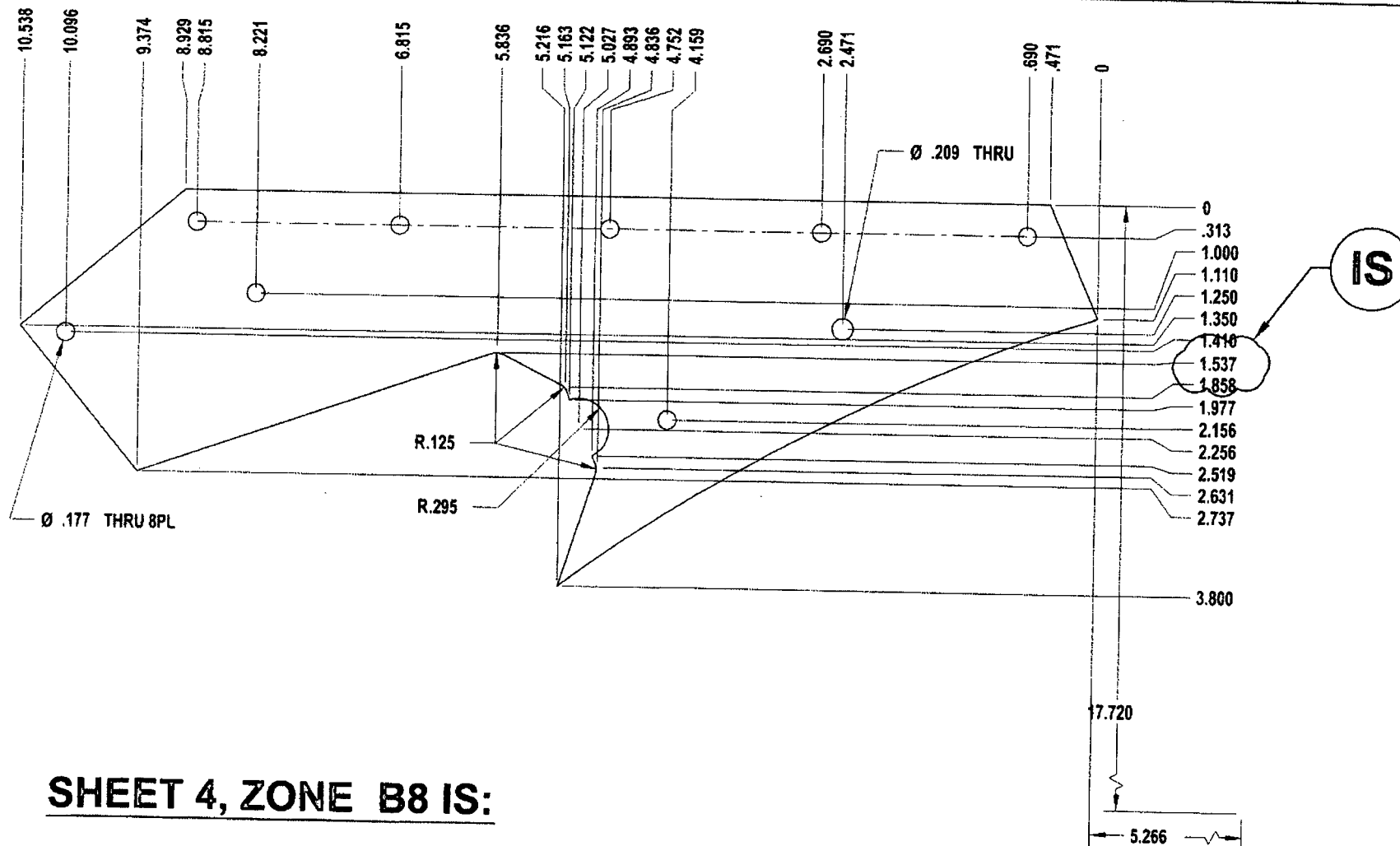
EFF: NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON:

REVISED ORDINATE DIMENSION.

ECR:
D-12-025



SHEET 4, ZONE B8 IS:

DOCUMENTS EFFECTED:

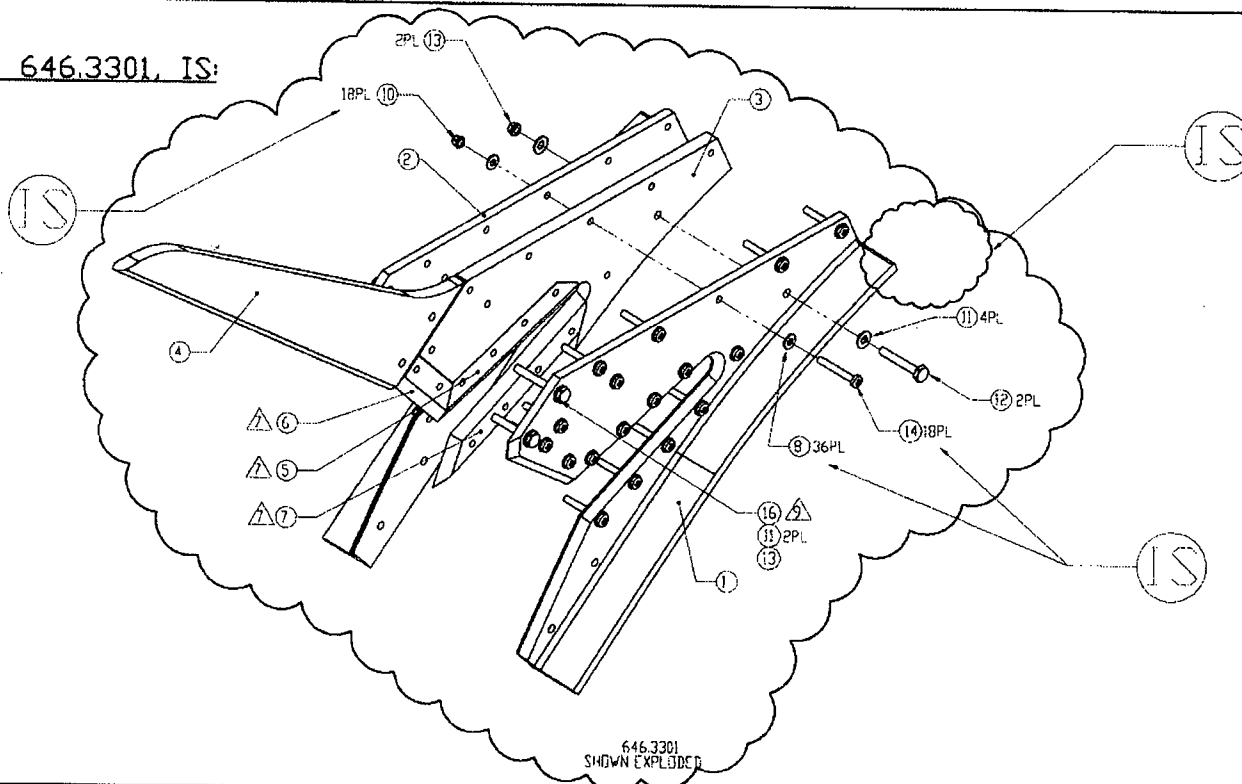
☐ RFMS ☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM

CHANGE CATEGORY
☐ MAJOR ☒ MINOR

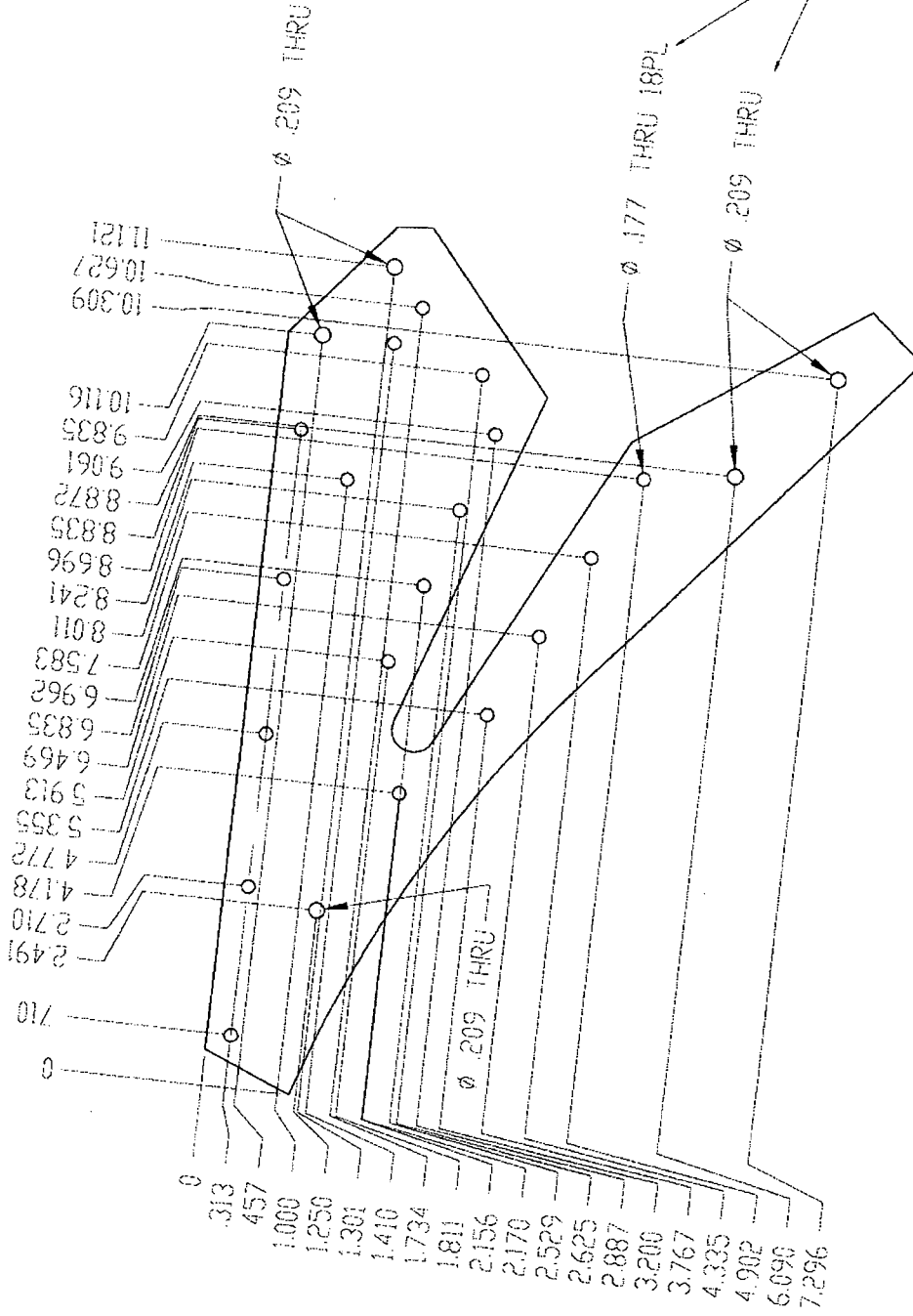
DER REVIEW REQUIRED
☐ YES ☒ NO

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 02196		SHEET 1 OF 2	
	DWG NO. 646.3300	REV: N/C	PREPARED BY S. HUFF	DATE: 01/05/09
	DWG TITLE: UPPER CUTTER ASSY			
APPROVED BY: ENGR <i>[Signature]</i>		MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER
TRANSACTION CODES (TC) A-ADD C-CREATE R-REVISE D-DELETE	REASON: REMOVED RIVETS IN FAVOR OF ADDITIONAL SCREWS			

SHEET 1, VIEW 646.3301, IS:



14	R	601.2765	18	SCREW	MS27039-0819
10	R	601.1541	18	LOCKNUT	MS21042L08
9	D	601.2766	3	RIVET	MS20470AD5-18
8	R	601.2764	36	WASHER	NAS1149FN832P
			.3301		
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
DOCUMENTS EFFECTED:				CHANGE CATEGORY	DER REVIEW REQUIRED
				☐ MDL ☒ INSTALL INSTRUC ☒ ICA ☐ FMS ☒ BOM	☐ MAJOR ☒ MINOR
					☐ YES ☒ NO



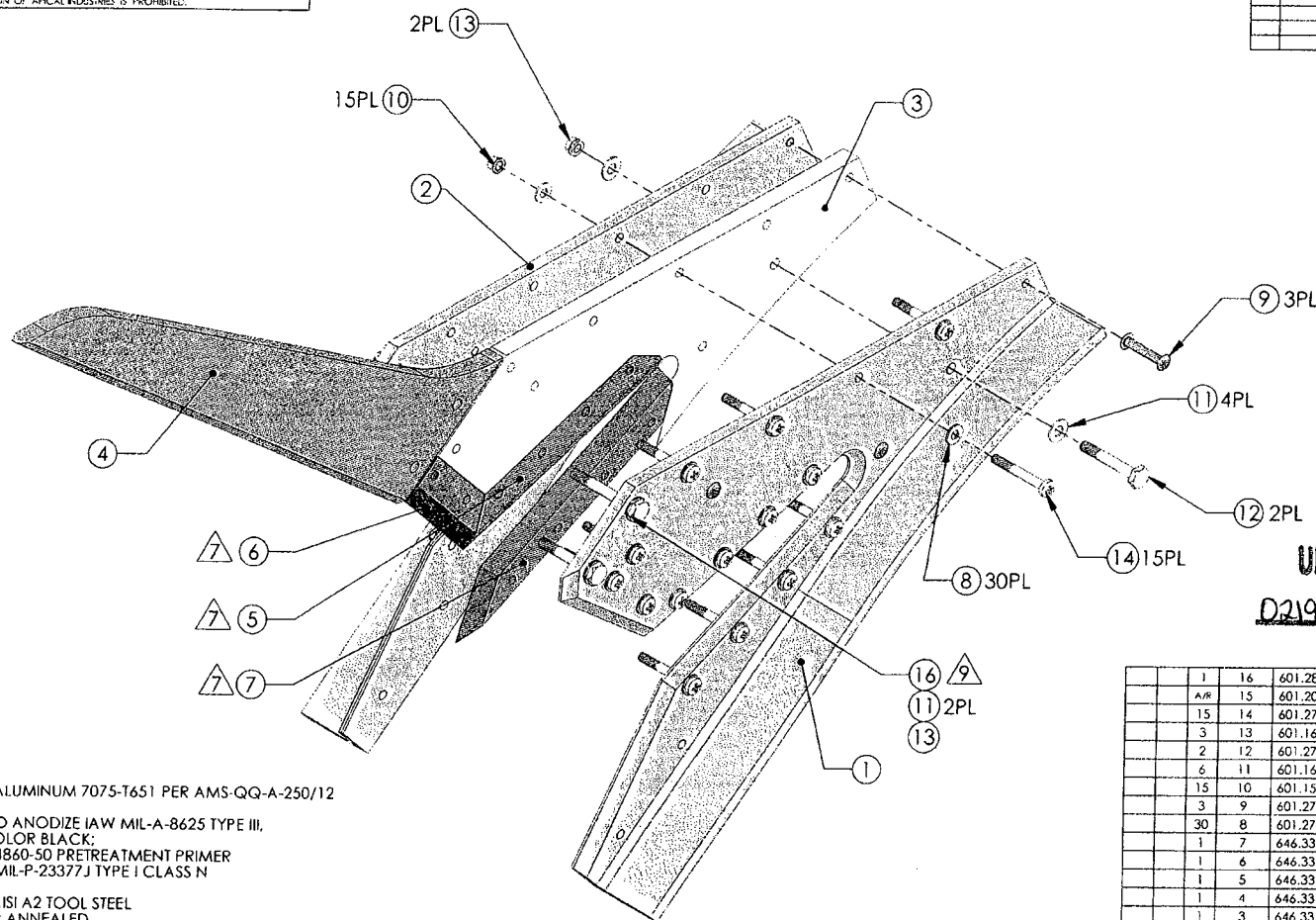
SECTION A-A

PART NUMBER	QTY	DESCRIPTION
-------------	-----	-------------

MATERIAL/SPECIFICATION

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



UNINCORPORATED ECN(s)

02196, 03724, 04765

NOTES:

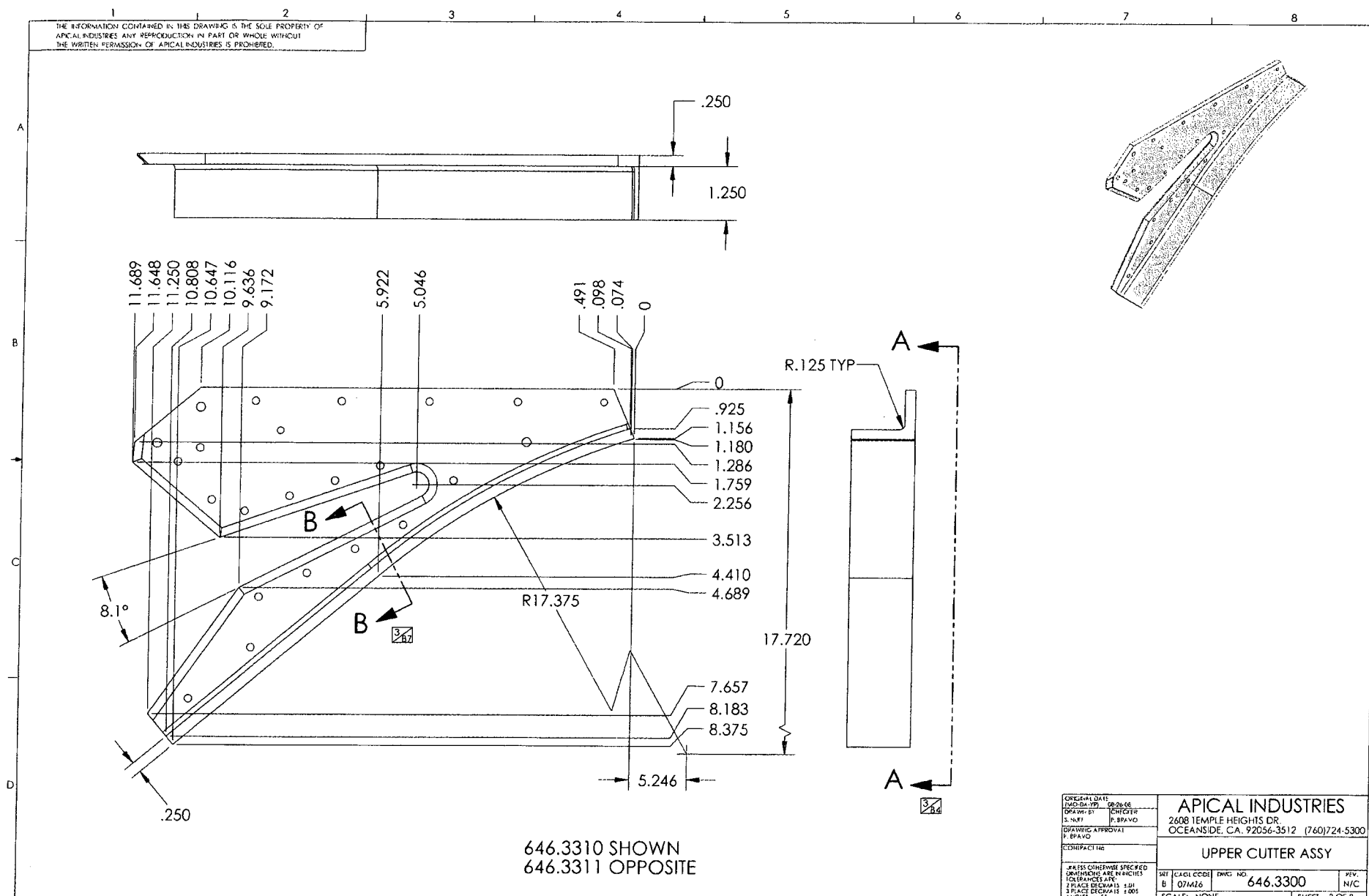
- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377J TYPE I CLASS N
- 3 MATERIAL: AISI A2 TOOL STEEL
CONDITION: ANNEALED
POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
- 4 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N
5. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
6. IDENTIFY IAW MPP-120
- 7 APPLY F/N 15 AS REQUIRED TO ALL FAYING SURFACES OF F/N 5, 6 & 7 UPON ASSEMBLY
- 8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE
- 9 INSTALL FASTENER FINGER-TIGHT

646.3301
SHOWN EXPLODED

QTY	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
1	16	601.2834	BOLT	AMS-344	
15	15	601.2045	RTV. LOCITE 598		
15	14	601.2765	SCREW	MS27039-0819	
3	13	601.1624	LOCKNUT	MS27042L3	
2	12	601.2763	BOLT	AMS-124	
6	11	601.1607	WASHER	MS27042L3	
15	10	601.1541	LOCKNUT	MS27042L3	
3	9	601.2766	RIVET	MS20474AC5-18	
30	8	601.2764	WASHER	MS27042L3	
1	7	646.3316	BLADE		
1	6	646.3315	BLADE		
1	5	646.3314	BLADE		
1	4	646.3313	UPPER GUIDE		
1	3	646.3312	CENTER PLATE		
1	2	646.3311	RH HALF		
1	1	646.3310	LH HALF		
1		646.3301	UPPER CUTTER ASSY		

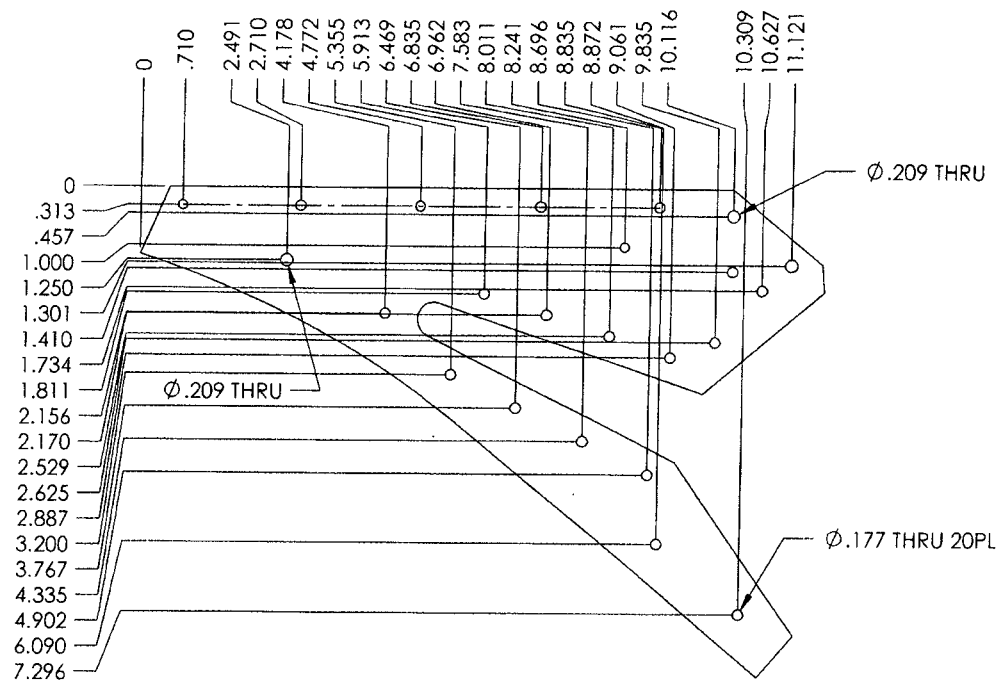
PARTS LIST		APICAL INDUSTRIES	
NEXT ASSY (S)		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
646.4000		UPPER CUTTER ASSY	
ORIGINAL DATE REVISIONS BY DATE CHECKED DATE		SHEET 1 OF 8	

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ORIGINAL DATE: 08-26-86 DESIGN BY: J. BRAYO S. NUT: P. BRAYO DRAWING APPROVAL: P. BRAYO CONTRACT NO:		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
J. BRAYO P. BRAYO		UPPER CUTTER ASSY	
J. BRAYO P. BRAYO		DWG. NO.: 646.3300	REV: N/C
J. BRAYO P. BRAYO		SCALE: NONE	SHEET: 2 OF 8

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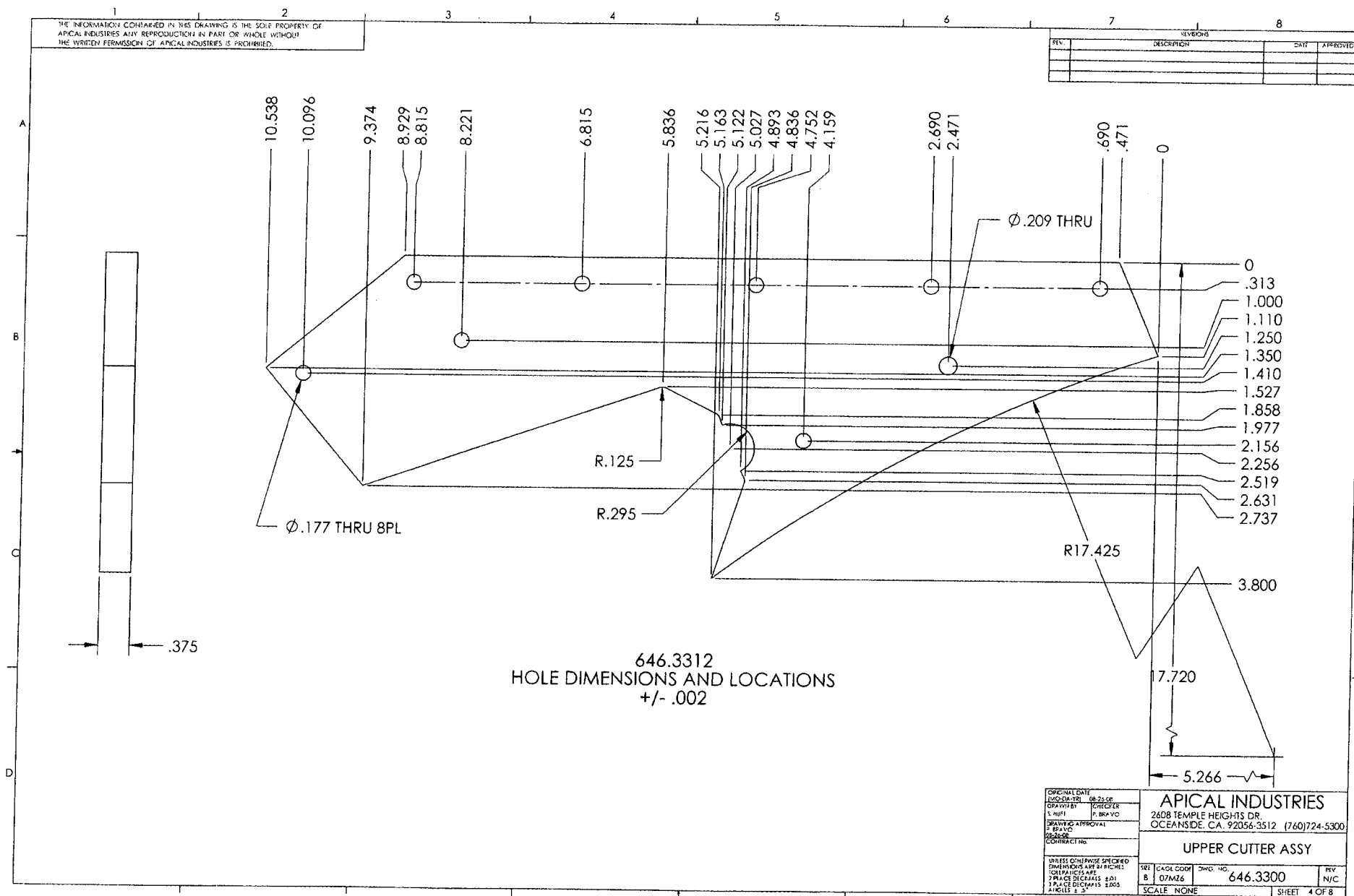
SECTION A-A

SECTION B-B

OPERATOR DATE		APICAL INDUSTRIES	
DESIGNER DATE		2608 TEMPLE HEIGHTS DR.	
DRAWN BY DATE		OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY DATE		UPPER CUTTER ASSY	
CONTRACT NO.		SCALE NONE	
UNLESS OTHERWISE SPECIFIED		SHEET 3 OF 8	
DIMENSIONS ARE IN INCHES		DATE CODE	
TOLERANCES ARE:		B 07/10/6	
2 PLACE DECIMALS .01		646.3300	
3 PLACE DECIMALS .005		REV. N/C	
ANGLES 1/2°			

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



ORIGINAL DATE
10/01/01 08:23:08
DRAWN BY
S. HUI
CHECKED BY
P. BRAYO
DRAWING APPROVAL
P. BRAYO
DATE
08/26/08
CONTRACT NO.

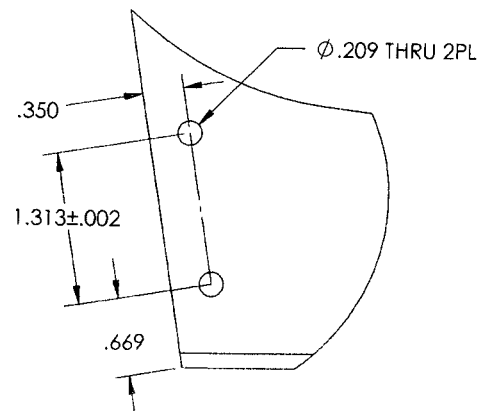
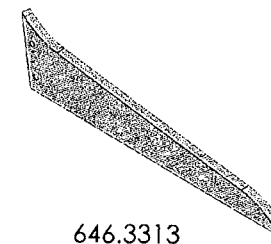
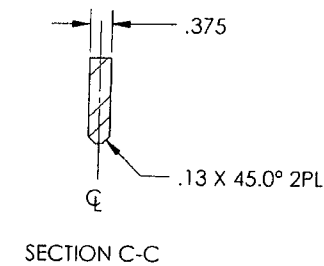
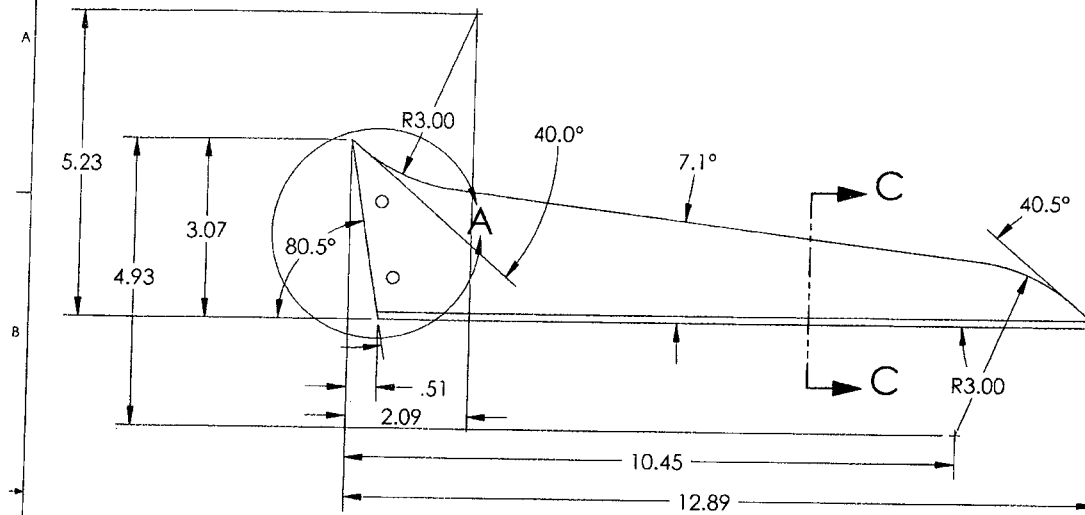
APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
DECIMALS ARE
2 PLACE DECIMALS ±.01
3 PLACE DECIMALS ±.005
ANGLES ±.5°

SHEET 4 OF 8
SCALE NONE
SHEET 4 OF 8

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REVISIONS			
REV	DESCRIPTION	DATE	EMPHATIC

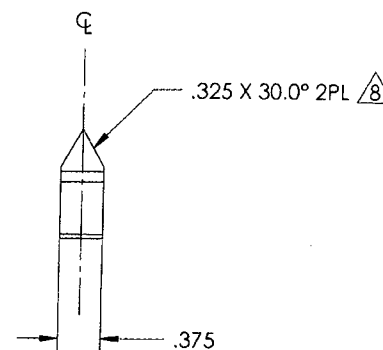
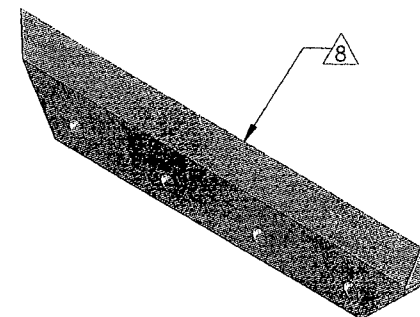
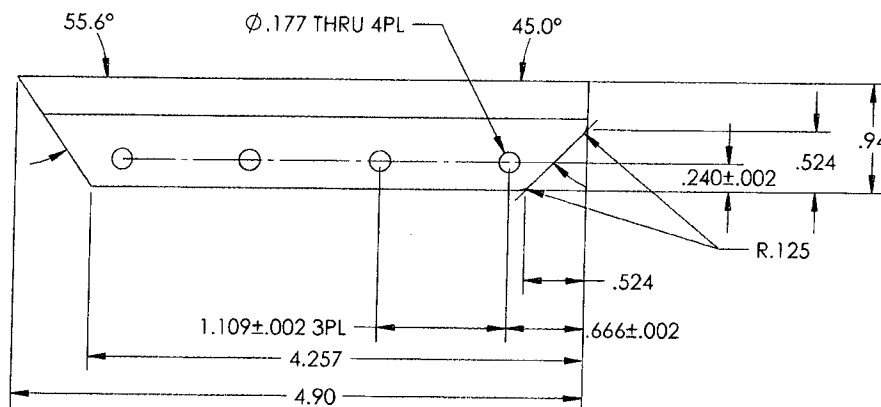


DETAIL A

ORIGINAL DATE: 06-20-05 DRAWN BY: J. HUR CHECKED BY: J. BRAVO DRAWING APPROVAL: J. BRAVO CONTRACT NO:			
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES DECIMALS ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°			
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		UPPER CUTTER ASSY	
SHEET NO: 8	FACE CODE: 07M76	DWG NO: 646.3300	REV: N/C
SCALE: NONE		SHEET 5 OF 8	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



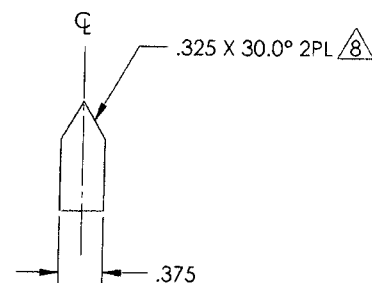
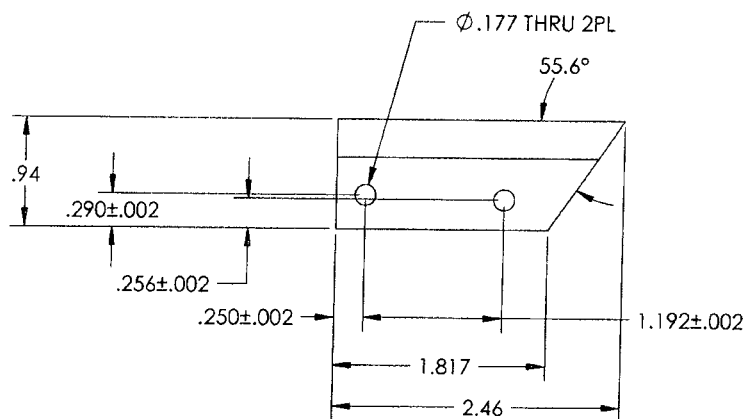
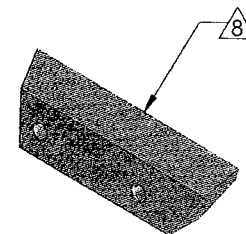
646.3314

ORIGINAL DATE 10-10-1981		06-26-08	
DRAWN BY J. HUI		P. SPAYO	
DRAWING APPROVAL 06-26-08		CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 7 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.5°		SET B CAGE CODE 07M26 DWG. NO. 646.3300 SCALE NONE	REV N/C SHEET 6 OF 8

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300
UPPER CUTTER ASSY

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

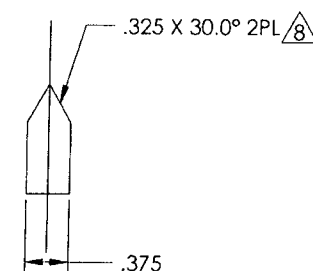
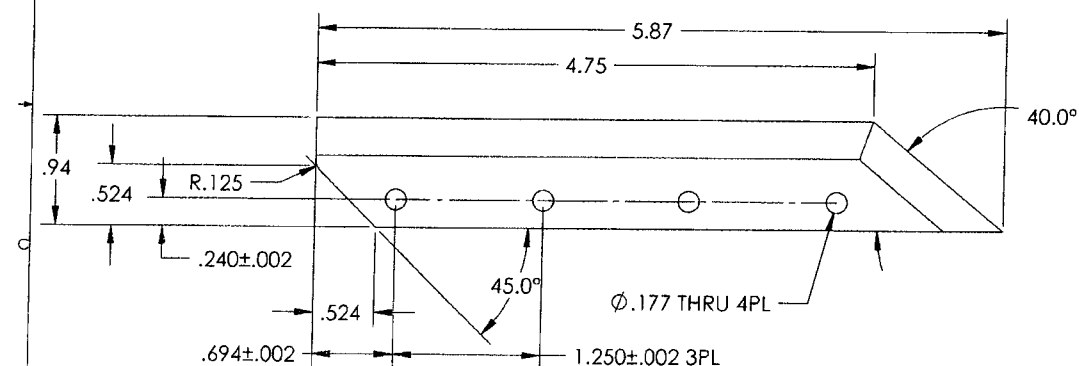
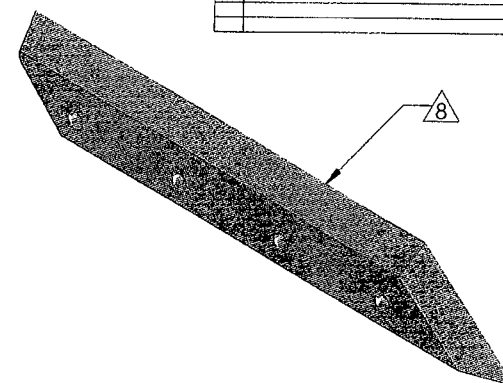


646.3315

ORIGINAL DATE (DD-MM-YY) 06-26-08 DRAWN BY S. HUFF CHECKED BY P. BEAVER DRAWING APPROVAL P. BEAVER CONTRACT NO.	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		
UPPER CUTTER ASSY			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.001 ANGLES ±.5°	REV. 8	CAGE CODE 07M26	DWG. NO. 646.3300
SCALE NONE		SHEET 7 OF 8	

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



646.3316

ORIGINAL DATE (DD-MM-YY) 10-26-08		APICAL INDUSTRIES	
DRAWN BY C. T. FLY	BY STA VO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL P. BRALVO	RELEASE	UPPER CUTTER ASSY	
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET 8	REV N/C
SCALE NONE		DWG. NO. 646.3300	SHEET 8 OF 8

DART AEROSPACE LTD		Work Order:	136146
Description: RH Half		Part Number:	646.3311
Inspection Dwg: 646.3300 Rev: N/C2		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
7.296	+/-0.005	7.296	✓		31006	Height gauge
3.767	+/-0.005	3.767	✓		...	...
0.457	+/-0.005	0.458	✓		↓	↓
0.313	+/-0.005	0.313	✓		↓	↓
0.710	+/-0.005	0.710	✓		↓	↓
6.469	+/-0.005	6.469	✓		↓	↓
10.116	+/-0.005	10.116	✓		↓	↓
10.309	+/-0.005	10.309	✓		↓	↓
Ø0.177	+0.005/-0.001	0.178	✓		—	gauge pin
Ø0.209	+0.005/-0.001	0.210	✓		...	...
0.250	+/-0.005	0.250	✓		718-120	Deep Tooth Mic
1.250	+/-0.005	1.253	✓		31006	Height gauge
R0.125	+/-0.005	0.125	✓		—	Radius gauge
3.513	+/-0.005	3.512	✓		31006	Height gauge
8.375	+/-0.005	8.372	✓		↓	↓
0.250	+/-0.005	0.247	✓		↓	↓
8.1°	+/-0.5°	8.1°	✓		↓	↓
11.689	+/-0.005	11.689	✓		↓	↓
11.250	+/-0.005	11.250	✓		↓	↓
0.200 x 45°	+/-0.005	0.200 x 45°	✓		↓	↓

Measured by: <i>W.P.</i>	Audited by: DAS 14	Preliminary Approval:
Date: 15/10/07	Date: 15/10/07	Date:

Rev	Date	Change	Revised by	Approved
A	13.09.17	New Issue	KJ	<i>[Signature]</i>



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 63965

Date: 22-Oct-15

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
10 ea	Part: D4726-1 HANDLE HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 Job: 20150766	Rev: A PO: PO30121	Line:
5 ea	Part: 646.3210 SUPPORT HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20150767	Rev: N/C PO: PO30121	Line:
4 ea	Part: 646.3311 RH HALF HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20150768	Rev: N/C PO: PO30121	Line:
6 ea	Part: 647.0113 STRUT DOUBLER HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20150769	Rev: PO: PO30121	Line:
2 ea	Part: 647.0410 TUBE REV HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2	Rev:	Line:



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 63965

Date: 22-Oct-15

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms	Ship Via				
<table border="1"><thead><tr><th>Quantity</th><th>Description</th></tr></thead><tbody><tr><td></td><td> Certificate of Conformance A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order. ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY DATE : <u>22/10/15</u> CERTIFIED SIGNATURE : <u></u> RECEIVER SIGNATURE : _____ </td></tr></tbody></table>		Quantity	Description		Certificate of Conformance A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order. ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY DATE : <u>22/10/15</u> CERTIFIED SIGNATURE : <u></u> RECEIVER SIGNATURE : _____
Quantity	Description				
	Certificate of Conformance A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order. ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY DATE : <u>22/10/15</u> CERTIFIED SIGNATURE : <u></u> RECEIVER SIGNATURE : _____				